

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
25 August 2005 (25.08.2005)

PCT

(10) International Publication Number  
**WO 2005/077486 A1**

(51) International Patent Classification<sup>7</sup>: **B01D 21/18**,  
21/06 // F16G 13/10, B65G 19/20

(21) International Application Number:  
PCT/FI2005/000009

(22) International Filing Date: 7 January 2005 (07.01.2005)

(25) Filing Language: Finnish

(26) Publication Language: English

(30) Priority Data:  
20040247 17 February 2004 (17.02.2004) FI

(71) Applicant (for all designated States except US): FINN-  
KETJU INVEST OY [FI/FI]; Rekitie 1, FI-26510 Rauma  
(FI).

(72) Inventor; and

(75) Inventor/Applicant (for US only): TUOMIKOSKI,  
Pekka [FI/FI]; Valtakatu 4 A 11, FI-26100 Rauma (FI).

(74) Agent: KANGASMÄKI, Reijo; Finnish Patent Consult-  
ing FPC, Hermiankatu 14, FI-33720 Tampere (FI).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

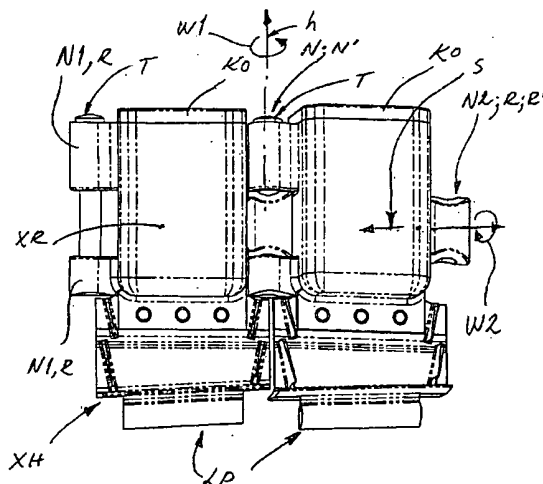
(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: SCRAPER



(57) Abstract: The invention relates to a scraper, which comprises an elongated, at least tension transmitting flexible structure, which is formed of formed pieces (X), being coupled with each other one after the other in a longitudinal direction (s) and that are arranged to twist (w1) in respect with each other round an axis standing in a direction of height (h) by means of a joint arrangement (N), whereby the joint arrangement (N) comprises edge projections (N1), existing in a preceding formed piece one below the other in the direction of height (h) of the formed piece, and a central projection (N2) existing in the following formed piece and that is to be placed between the above edge projections. A joint arrangement (N; N') is arranged to enable twisting (w2) of the successive formed pieces (X) in respect with each other round an essentially longitudinal axis (s).